CLAIMS

1. A crosstalk elimination circuit that corrects a display signal input to each of a plurality of picture element electrodes provided in a liquid crystal panel to eliminate crosstalk of a liquid crystal display apparatus using the liquid crystal panel, the circuit including an LUT that inputs a display signal of an image to be displayed to output a correction signal for correcting the display signal, the crosstalk elimination circuit using the correction signal output from the LUT to correct a display signal input to each of the picture element electrodes.

2. The crosstalk elimination circuit as defined in claim 1, wherein correction value data are acquired from the LUT with the use of the display signal of a correction target picture element and a display signal of an adjacent picture element affecting the correction target picture element to generate the crosstalk and wherein the acquired correction value data are output as the correction signal.

3. The crosstalk elimination circuit as defined in claim 2, wherein the adjacent picture element is another picture element coupled capacitively to a picture element electrode for driving the liquid crystal of the correction target picture element.

4. The crosstalk elimination circuit as defined in claim 3, wherein the LUT is disposed for each primary color of RGB to enable individual setup of the correction value of the LUT for each color.

5. The crosstalk elimination circuit as defined in any one of claims 2 to 4, wherein signal level intervals for setting the correction value data in the LUT are established roughly by a predetermined level width relative to a level width that may be achieved by the signal level of the display signal input to each picture element electrode.

6. The crosstalk elimination circuit as defined in claim 5, wherein when extracting from the LUT the correction value data corresponding to the signal level between the signal levels with the correction value data set, the target correction value data are extracted by performing linear interpolation between the signal levels.

7. The crosstalk elimination circuit as defined in claim 6, wherein when the LUT is created by omitting regions where the correction value data are zero which are extracted with the use of the signal level of the correction target picture element and the signal level of the adjacent picture element and when the linear interpolation is performed between a signal

level having the correction value data of zero and a signal level set adjacently to the signal level, the target correction value data are extracted by performing the linear interpolation between the correction value data of the adjacently set signal level and fixed correction value data 0 defined in advance.

8. The crosstalk elimination circuit as defined in any one of claims 5 to 7, wherein the signal level intervals for setting the correction value data in the LUT are established with finer intervals of the signal levels of the correction target picture element as compared to the signal levels of the adjacent picture element.

9. The crosstalk elimination circuit as defined in any one of claims 2 to 8, further including an adjacent picture element correction LUT for correcting the display signal of the adjacent picture element adjacent to the correction target picture element, wherein the adjacent picture element correction LUT uses a display signal of a next adjacent picture element adjacent to the adjacent picture element and affecting the adjacent picture element to generate crosstalk and the display signal of the adjacent picture element to extract correction value data of the adjacent picture element, which are output as an adjacent picture element correction signal, and wherein the LUT for correcting the correction target picture element inputs the display signal of the adjacent

picture element corrected with the use of the signal output from the adjacent picture element correction LUT and the display signal of the correction target picture element to extract the correction data of the correction target picture element.

10. The crosstalk elimination circuit as defined in claim 9, wherein signal level intervals for setting the correction value data in the adjacent picture element correction LUT are established more roughly than the signal level intervals for setting the correction value data in the LUT for correcting the correction target picture element.

11. A liquid crystal display apparatus provided with the crosstalk elimination circuit as defined in any one of claims 1 to 10.

12. A liquid crystal display apparatus that uses an active matrix type liquid crystal panel with a plurality of picture element electrodes formed in a matrix shape to display color images by applying voltages to the picture element electrodes and by retaining this electric charge for one frame period, the apparatus comprising a correcting means that corrects a display signal input to each picture element electrode, the correcting means correcting the display signal to be input to the picture element electrode such that display luminance of

the picture element electrode becomes substantially constant regardless of display signals input to other picture element electrodes during one future frame period after the display signal is input to the picture element electrode until the next time the display signal is input again.

13. The liquid crystal display apparatus as defined in claim 12, wherein the correcting means generates a correction signal for the display signal to be input to the picture element electrode with the use of the display signals to be input to other picture element electrodes and the display signal to be input to the picture element electrode during one future frame period from the timing when the display signal should be input to the picture element electrode to the timing when the next display signal should be input again.

14. A liquid crystal display apparatus that uses an active matrix type liquid crystal panel with a plurality of picture element electrodes formed in a matrix shape to display color images by applying voltages to the picture element electrodes and by retaining this electric charge for one frame period, the apparatus comprising a correcting means that corrects a display signal input to each picture element electrode, the correcting means correcting the display signal to be input to the picture element electrode such that the display luminance of the picture element electrode becomes substantially

constant regardless of the display signals input to other picture element electrodes during one past frame period until the display signal is input to the picture element electrode.

15. The liquid crystal display apparatus as defined in claim 14, wherein the correcting means generates a correction signal for the display signal to be input to the picture element electrode with the use of the display signals input to other picture element electrodes and the display signal to be input to the picture element electrode during one past frame period until the timing when the display signal should be input to the picture element electrode.

16. A liquid crystal display apparatus that uses an active matrix type liquid crystal panel with a plurality of picture element electrodes formed in a matrix shape to display color images by applying voltages to the picture element electrodes and by retaining this electric charge for one frame period, the apparatus comprising a correcting means that corrects a display signal input to each picture element electrode, the correcting means correcting in advance the display signal to be input to the picture element electrode such that the display luminance of the picture element electrode becomes substantially constant regardless of the display signals input to other picture element electrodes arranged along the source line of the picture element electrode.

17. The liquid crystal display apparatus as defined in claim 16, wherein the correcting means generates a correction signal for the display signal to be input to the picture element electrode with the use of the display signals to be input to other picture element electrodes arranged along the source line of the picture element electrode and the display signal to be input to the picture element electrode.

18. The liquid crystal display apparatus as defined in claim 16, wherein the correcting means generates a correction signal for the display signal to be input to the picture element electrode with the use of the display signals to be input to other picture element electrodes arranged along the source line of the picture element electrode, the display signals to be input to other picture element electrodes arranged along the source line of the adjacent picture element electrode adjacent to the source line of the picture element electrode in the vertical direction, and the display signal to be input to the picture element electrode.

19. The liquid crystal display apparatus as defined in claim 12, wherein the correcting means generates a correction signal for the display signal to be input to the picture element electrode with the use of the display signals to be input to other picture element electrodes arranged along the source line

of the picture element electrode and the display signal to be input to the picture element electrode during one future frame period from the timing when the display signal should be input to the picture element electrode to the timing when the next display signal should be input again.

20. The liquid crystal display apparatus as defined in claim 14, wherein the correcting means generates a correction signal for the display signal to be input to the picture element electrode with the use of the display signals input to other picture element electrodes arranged along the source line of the picture element electrode and the display signal to be input to the picture element electrode during one past frame period until the timing when the display signal should be input to the picture element electrode.

21. A crosstalk elimination circuit of a liquid crystal display apparatus that uses an active matrix type liquid crystal panel with a plurality of picture element electrodes formed in a matrix shape to display color images by applying voltages to the picture element electrodes and by retaining this electric charge for one frame period, the crosstalk elimination circuit comprising a correcting means that corrects a display signal input to each picture element electrode, the correcting means correcting the display signal to be input to the picture element electrode such that the

display luminance of the picture element electrode becomes substantially constant regardless of the display signals input to other picture element electrodes during one future frame period after the display signal is input to the picture element electrode until the next time the display signal is input again.

22. A crosstalk elimination circuit of a liquid crystal display apparatus that uses an active matrix type liquid crystal panel with a plurality of picture element electrodes formed in a matrix shape to display color images by applying voltages to the picture element electrodes and by retaining this electric charge for one frame period, the crosstalk elimination circuit comprising a correcting means that corrects a display signal input to each picture element electrode, the correcting means correcting the display signal to be input to the picture element electrode such that the display luminance of the picture element electrode becomes substantially constant regardless of the display signals input to other picture element electrodes during one past frame period until the display signal is input to the picture element electrode.

23. A crosstalk elimination circuit of a liquid crystal display apparatus that uses an active matrix type liquid crystal panel with a plurality of picture element electrodes formed in a matrix shape to display color images by applying

voltages to the picture element electrodes and by retaining this electric charge for one frame period, the crosstalk elimination circuit comprising a correcting means that corrects a display signal input to each picture element electrode, the correcting means correcting the display signal to be input to the picture element electrode such that the display luminance of the picture element electrode becomes substantially constant regardless of the display signals input to other picture element electrodes arranged along the source line of the picture element electrode.

24. A display control method of a liquid crystal display apparatus that uses an active matrix type liquid crystal panel with a plurality of picture element electrodes formed in a matrix shape to display color images by applying voltages to the picture element electrodes and by retaining this electric charge for one frame period, the method including a correcting step of correcting a display signal input to each picture element electrode, at the correcting step, the display signal to be input to the picture element electrode being corrected such that the display luminance of the picture element electrode becomes substantially constant regardless of the display signals input to other picture element electrodes during one future frame period after the display signal is input to the picture element electrode until the next time the display signal is input again.

25. The display control method as defined in claim 24, wherein at the correcting step, a correction signal for the display signal to be input to the picture element electrode is generated from the display signals to be input to other picture element electrodes and the display signal to be input to the picture element electrode during one future frame period from the timing when the display signal should be input to the picture element electrode to the timing when the next display signal should be input again.

26. A display control method of a liquid crystal display apparatus that uses an active matrix type liquid crystal panel with a plurality of picture element electrodes formed in a matrix shape to display color images by applying voltages to the picture element electrodes and by retaining this electric charge for one frame period, the method including a correcting step of correcting a display signal input to each picture element electrode, at the correcting step, the display signal to be input to the picture element electrode being corrected such that the display luminance of the picture element electrode becomes substantially constant regardless of the display signals input to other picture element electrodes during one past frame period until the display signal is input to the picture element electrode.

27. The display control method as defined in claim 26, wherein at the correcting step, a correction signal for the display signal to be input to the picture element electrode is generated from the display signals to be input to other picture element electrodes and the display signal to be input to the picture element electrode during one past frame period until the timing when the display signal should be input to the picture element electrode.

28. A display control method of a liquid crystal display apparatus that uses an active matrix type liquid crystal panel with a plurality of picture element electrodes formed in a matrix shape to display color images by applying voltages to the picture element electrodes and by retaining this electric charge for one frame period, the method including a correcting step of correcting a display signal input to each picture element electrode, at the correcting step, the display signal to be input to the picture element electrode being corrected such that the display luminance of the picture element electrode becomes substantially constant regardless of the display signals input to other picture element electrodes arranged along the source line of the picture element electrode.

29. The display control method as defined in claim 28, wherein at the correcting step, a correction signal for the

display signal to be input to the picture element electrode is generated from the display signals to be input to other picture element electrodes arranged along the source line of the picture element electrode and the display signal to be input to the picture element electrode.

30. The display control method as defined in claim 28, wherein at the correcting step, a correction signal for the display signal to be input to the picture element electrode is generated from the display signals to be input to other picture element electrodes arranged along the source line of the picture element electrode, the display signals to be input to picture element electrodes arranged along the source line of the adjacent picture element electrode adjacent to the source line of the picture element electrode in the vertical direction, and the display signal to be input to the picture element electrode.

31. The display control method as defined in claim 24, wherein at the correcting step, a correction signal for the display signal to be input to the picture element electrode is generated from the display signals to be input to picture element electrodes arranged along the source line of the picture element electrode and the display signal to be input to the picture element electrode during one future frame period from the timing when the display signal should be input to the

picture element electrode to the timing when the next display signal should be input again.

32. The display control method as defined in claim 26, wherein at the correcting step, a correction signal for the display signal to be input to the picture element electrode is generated from the display signals input to picture element electrodes arranged along the source line of the picture element electrode and the display signal to be input to the picture element electrode during one past frame period until the timing when the display signal should be input to the picture element electrode.